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(54) COMMUNICATION SYSTEM

(57)Abstract:

PURPOSE: To reduce system cost as one antenna system, by dividing an input signal into two and transmitting in parallel the result by a 4-PSK system, in a radio system of hexadecimal orthogonal amplitude modulation.

CONSTITUTION: A signal in 4-bit transmitted from buses 1, 2 of each channel in normal case is inputted to radio sets 11-1, 11-2 of the 16 QAM system and transmitted via an antenna 13. If a failure of line takes place because of differential fading or the like in any of common use channels, the input of the buses 1, 2 of the channel is transmitted by switching to radio sets 12-2, 12-1 of the 4-PSK system of a spare channel or the bus 2, e.g., of the buses 1, 2 is switched to the radio set 12-1 and the signal on the buses 1, 2 is transmitted in parallel in the radio set 11-1 of the 16 QAM system and the radio set 12-1 of the 4-PSK system. In case of line is failed, the signal is transmitted by the 4-PSK system immune from the C/N and waveform distortion, then the gain of the system is improved.

